Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (original) A method for detecting pressure buildup in an exhaust passage of an internal combustion engine having an emission control device and an exhaust gas recirculation system with an exhaust valve, comprising:

moving the exhaust valve in the exhaust gas recirculation system to a preselected open position;

estimating exhaust pressure buildup based on manifold pressure and an indication of pressure in the exhaust gas recirculation system.

2. (original) The method of claim 1 wherein said preselected open position is a substantially fully open position.

3. (original) The method of claim 2 wherein said indication of pressure in the exhaust gas recirculation system includes a differential pressure across an orifice in the exhaust gas recirculation system.

4. (original) The method of claim 3 wherein said orifice is upstream of the exhaust valve.

5. (original) The method of claim 3 wherein said orifice is downstream of the exhaust valve.

6. (original) The method of claim 1 wherein said manifold pressure is measured from a manifold pressure sensor.

7. (original) The method of claim 1 wherein said manifold pressure is estimated from a mass air flow sensor.

8. (original) The method of claim 1 wherein the emission control device is a three way catalyst.

9. (original) The method of claim 1 wherein the emission control device is a particulate filter.

10. (original) The method of claim 9 further comprising raising exhaust gas temperature to regenerate the particulate filter based on said estimated exhaust pressure buildup.

11. (original) The method of claim 1 further comprising taking default action in response to said estimated exhaust pressure buildup.

12. (original) A system for an internal combustion engine, comprising:

an emission control device in an exhaust passage of the engine;

an exhaust gas recirculation system with an exhaust valve coupled between an intake and exhaust manifold of the engine, the exhaust gas recirculation system having at least a valve, an

orifice, and a pressure sensor providing at least a partial indication of differential pressure across said orifice; and

a computer readable storage medium having code for moving said exhaust valve in the exhaust gas recirculation system to a preselected open position; and code for detecting exhaust pressure buildup based on said pressure sensor and an indication of manifold pressure.

13. (original) The system of claim 12 wherein said orifice is upstream of the valve.

14. (original) The system of claim 12 wherein said orifice is downstream of the valve.

15. (original) The system of claim 12 wherein said pressure sensor is a differential pressure sensor.

16. (original) A system for an internal combustion engine, comprising:

an emission control device in an exhaust passage of the engine;

an intake manifold pressure sensor;

an exhaust gas recirculation system with an exhaust valve coupled between an intake and exhaust manifold of the engine, the exhaust gas recirculation system having at least a valve, an orifice downstream of said valve, and a pressure sensor indicating pressure between said valve and said orifice; and

a computer readable storage medium having code for moving said exhaust valve in the exhaust gas recirculation system to a preselected open position; and code for detecting exhaust

pressure buildup based on said intake manifold pressure sensor and said exhaust gas recirculation system pressure sensor.

17. (original) The system of claim 16 wherein said emission control device is a particulate filter.

18. (original) The system of claim 16 wherein said computer readable storage medium code for moving said exhaust valve in the exhaust gas recirculation system to said preselected open position includes moving said valve to a substantially fully open position.

19. (original) The system of claim 18 wherein said computer readable storage medium further comprises code for moving said exhaust valve to said substantially fully open position under a selected air amount conditions.

20. (original) The system of claim 16 wherein said intake manifold pressure sensor is an absolute pressure sensor.

21. (currently amended) A method for detecting pressure buildup in an exhaust passage of an internal combustion engine having an emission control device and an exhaust gas recirculation system with an exhaust valve and a sensor, comprising:

detecting exhaust pressure buildup based **on** information from the sensor in the exhaust gas recirculation system.

22. (original) The method of claim 21 further comprising performing said detection while said valve is located in an open position.

23. (original) The method of claim 22 said open position is a substantially fully open position.

24. (original) The method of claim 23 where the exhaust gas recirculation system further comprises an orifice, wherein said orifice is upstream of the exhaust valve.

25. (original) The method of claim 23 where the exhaust gas recirculation system further comprises an orifice, wherein said orifice is downstream of the exhaust valve.

26. (original) The method of claim 21 wherein the emission control device is a three way catalyst.

27. (original) The method of claim 21 wherein the emission control device is a particulate filter.